

Work Order ID 153479***153479***

Page 1

Monday, November 21, 2016 9:23:20 AM

Item ID: D3413-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: O-Ring

Start Date: 11/15/2016 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/21/2016 Req'd Qty: 12.00

12

Customer:

Reference:

DAS
21
9-39

Approvals:

Process Plan:

Date:

NOV 21 2016

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3413

Rev A

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.18

FLOW CNC Waterjet

1-Cut as per Dwg D3413

Dwg Rev: AProg Rev: A

2- Deburr and drill hole if required as per dwg D3413 & QSI018 4.1 .

(12)

on 11/11/30

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.04

Quality Control

(12)

on 11/11/30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

153479

Monday, November 21, 2016 9:23:20 AM

N900040100

Setup Start *NS1*

Stop *NS2*

12

Cust Item ID:

Start Date: 11/15/2016 **Start Qty:** 12.00

12

Customer:

Required Date: 11/21/2016 **Req'd Qty:** 12.00

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC8- Inspect parts - second check

0.00

120

OC

Memo

0.04

Quality Control

DAS
38
9-89
NOV 30 2016

150 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Memo

0.08

Powder Coating

START TIME:

1:30

OVEN TEMPERATURE:

4/20' FINISH TIME:

2.00.

160 QC3- Inspect Part Finish

0.00

160

OC

Memo

0.04

Quality Control

DAS
38
9-89

DEC 02 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																											
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																												
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																												
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																												
Large Fab ☐	Composite ☐	Supplier ☐																																																																													
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																											
Description Work Order Deviation			Disposition																																																																												
			Completed By																																																																												
			Lead hand / Supervisor Approval Verification																																																																												
			QC / QA Coordinator Approval																																																																												
<table style="width:100%; border: none;"> <tr> <td colspan="3" style="text-align: center;">Root Cause</td> <td colspan="3" style="text-align: center;">FAULT CATEGORY</td> </tr> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">☐ No Re-verification</td> <td style="border: none;">☐ Pressure/Forced</td> <td style="border: none;">☐ Temperature/Cure</td> <td style="border: none;">☐ Power Loss/Surge</td> <td style="border: none;">☐ Positioned Wrong</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">☐ Operator</td> <td style="border: none;">☐ Bending</td> <td style="border: none;">☐ Set-up</td> <td style="border: none;">☐ Folio/Program</td> <td style="border: none;">☐ Outside Dimensions</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">☐ Offset/Setup</td> <td style="border: none;">☐ Centre Not Concentric</td> <td style="border: none;">☐ BOM/Route</td> <td style="border: none;">☐ Grain</td> <td style="border: none;">☐ Over/Under tolerance</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">☐ Supplier</td> <td style="border: none;">☐ Cracks</td> <td style="border: none;">☐ Broken/Damage/Defect</td> <td style="border: none;">☐ Weld</td> <td style="border: none;">☐ Part Incorrect</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">☐ Training</td> <td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td> <td style="border: none;">☐ Inspection Incomplete/Unqualified</td> <td style="border: none;">☐ Wrong Stock Pulled</td> <td style="border: none;">☐ Part Lost/Missing</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">☐ Use for Testing</td> <td style="border: none;">☐ Cuffs</td> <td style="border: none;">☐ Contamination</td> <td style="border: none;">☐ Out of Sequence</td> <td style="border: none;">☐ Part Moved</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">☐ Poor Information</td> <td style="border: none;">☐ Crushing</td> <td style="border: none;">☐ Countersink</td> <td style="border: none;">☐ Off-set</td> <td style="border: none;">☐ Drawing</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">☐ Rushing</td> <td style="border: none;">☐ Heat Treat</td> <td style="border: none;">☐ Cut Too Short</td> <td style="border: none;">☐ Mislabeled</td> <td style="border: none;">☐ Finish</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">☐ Product Improvement</td> <td style="border: none;">☐ Wave/Twist in Tube</td> <td style="border: none;">☐ Instructions Incomplete/Unclear</td> <td style="border: none;">☐ Fit/Function</td> <td style="border: none;">☐ Misread</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">☐ Process Improvement</td> <td style="border: none;">☐ Marks/Chatter</td> <td style="border: none;">☐ Drill Holes</td> <td style="border: none;">☐ Misaligned/off center</td> <td style="border: none;">☐ Turning Sequence</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">☐ Manufacturing Process</td> <td colspan="4" rowspan="2" style="vertical-align: top;">OTHER : _____</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">☐ Past Due</td> </tr> </table>						Root Cause			FAULT CATEGORY			Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved	Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing	Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish	LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence	Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____				Misidentified ☐	☐ Past Due
Root Cause			FAULT CATEGORY																																																																												
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong																																																																										
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions																																																																										
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance																																																																										
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect																																																																										
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																																																										
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved																																																																										
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing																																																																										
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish																																																																										
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread																																																																										
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence																																																																										
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____																																																																													
Misidentified ☐	☐ Past Due																																																																														

Work Order ID 153479

Monday, November 21, 2016 9:23:20 AM

153479

Page 3

Item ID: D3413-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: O-Ring

Start Date: 11/15/2016 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/21/2016 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Identify as per dwg & Stock Location: <u>51530</u>	0.00							
170									
Packaging	Memo	0.20				12	DAS 6 9-89	DEC 02 2016	
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.02					DAS 21 9-89	DEC 05 2016	
Quality Control									

mf
16-12-05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																					
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																										
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																										
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																										
Large Fab ☐	Composite ☐	Supplier ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																						
Description Work Order Deviation				Disposition																																																									
Root Cause <table style="width:100%; border: none;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="width:33%;">Pressure/Forced ☐</td> <td style="width:33%;">Temperature/Cure ☐</td> <td style="width:33%;">Power Loss/Surge ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> </tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Crushing ☐	Countersink ☐	Off-set ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐
Environment ☐	No Re-verification ☐																																																												
Design ☐	Operator ☐																																																												
Doc/Data ☐	Offset/Setup ☐																																																												
Equip/Tooling ☐	Supplier ☐																																																												
Handling/Pre ☐	Training ☐																																																												
Material ☐	Use for Testing ☐																																																												
Internal Transport ☐	Poor Information ☐																																																												
Tribal Knowledge ☐	Rushing ☐																																																												
LOA ☐	Product Improvement ☐																																																												
Substation ☐	Process Improvement ☐																																																												
Past Expiry Date ☐	Manufacturing Process ☐																																																												
Misidentified ☐	Past Due ☐																																																												
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐																																																											
Bending ☐	Set-up ☐	Folio/Program ☐																																																											
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐																																																											
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐																																																											
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐																																																											
Cuffs ☐	Contamination ☐	Out of Sequence ☐																																																											
Crushing ☐	Countersink ☐	Off-set ☐																																																											
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐																																																											
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐																																																											
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐																																																											
		OTHER : ☐																																																											

Picklist Print

Monday, November 21, 2016 9:23:19 AM

Page 1
1

Work Order ID: 153479

153479

Parent Item: D3413-1

D3413-1

Parent Item Name: O-Ring

Start Date: 11/15/2016

Required Date: 11/21/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A05.09.13New issueKJ/JLM
IPP Rev:B Now on Waterjet 07-05-28 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.250X4.000		Purchased		No		100	f	16.9000	0.25	3.157895			

M304B0 250X4 000

pull 11/30

304 BAR .250 x 4.00

Location	Loc Qty	Loc Code
MAT009	16.9	
M123483	1.8	
M134776	3.1	
M135868	12	

1.8
1.2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

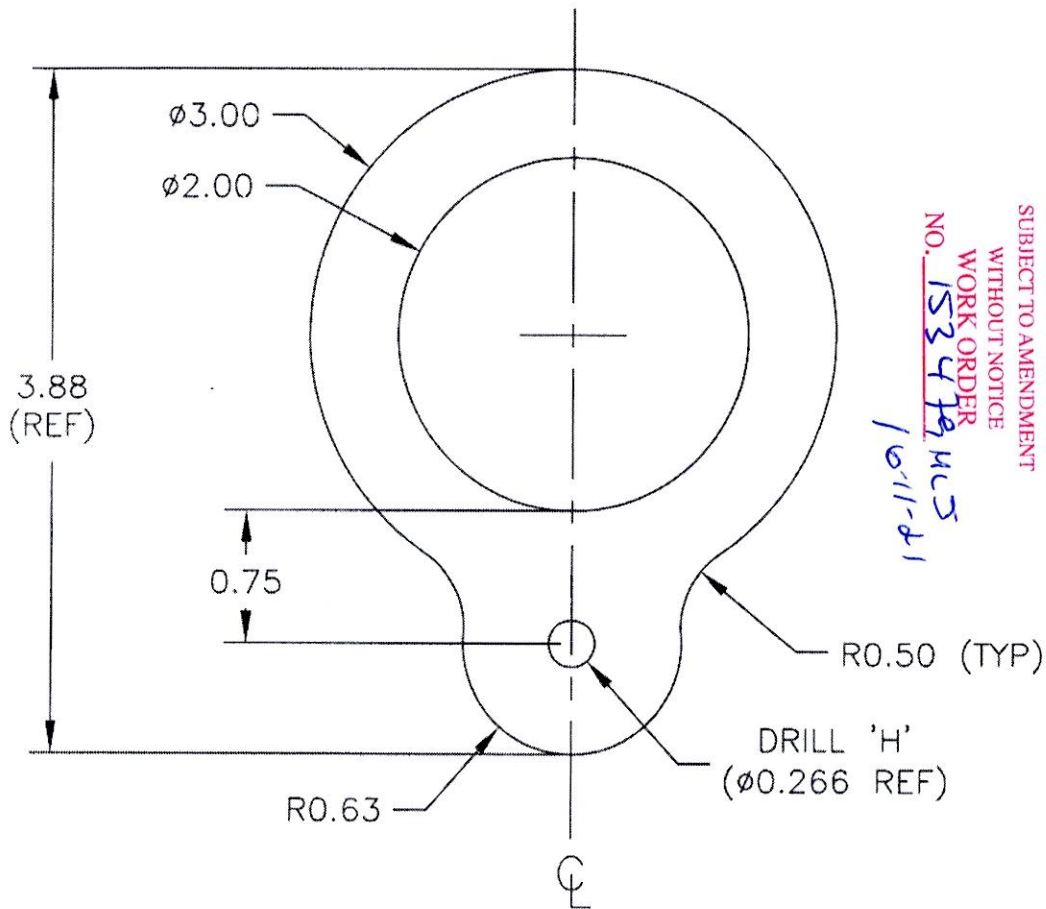
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

DART

DESIGN CP	DRAWN BY CP	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3413	REV. A SHEET 1 OF 1
DATE 05.03.16		TITLE RING	SCALE 1:1
A	05.03.16	NEW ISSUE	

**D3413-1 RING**

- 1) MATERIAL: AISI 304/316 SS PLATE, 0.250 THICK (REF DART SPEC. M304S3GA)
- 2) FINISH: POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) DEBURR ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

Copyright © 2005 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.